

**PROGRESSIVE DEGREE PROGRAM  
COURSE PLAN TEMPLATE**

<b>USC SCHOOL</b>	Viterbi School of Engineering
<b>ACADEMIC DEPARTMENT</b>	Mork Family Department
<b>GRADUATE PROGRAM</b>	Chemical Engineering
<b>POST CODE</b>	43
<b>TERM EFFECTIVE DATE</b>	Fall 2022

**PROGRAM DESCRIPTION**

A brief description of the graduate program.

Chemical Engineering is the engineering discipline which makes extensive use of chemical transformations in addition to physical transformations to achieve added value. Because all manufacturing involves chemical transformations in one way or another, chemical engineers are employed in virtually all manufacturing industries, from the basic chemical, materials, energy, food, pharmaceutical and microelectronics industries to the myriad consumer products industries.

**COMMON BACHELOR DEGREE PROGRAM PATHWAYS**

A list of common bachelor's degrees that undergraduate students pursue in advance of pursuing a progressive degree option with this graduate program. Some programs are restricted to certain majors while others are open to all students.

Chemical Engineering	
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**PREPARATORY UNDERGRADUATE COURSES**

A list of courses at the undergraduate level that prepare students for the graduate program. Required coursework is listed first, followed by recommended courses. If not applicable, this section will be blank.

Dept. Prefix - Course #	Course Title	Required or Recommended	Units
	NONE		

**UNDERGRADUATE COURSES USED TO REDUCE GRADUATE LEVEL UNITS**

A list of undergraduate level courses that may be used to reduce the number of graduate level units required for the graduate program. If there are none, that is specified instead.

Dept. Prefix - Course #	Course Title	Units
CHE 450	Sustainable Energy	4
CHE 475	Physical Properties of Polymers	4
CHE 487	Nanotechnology and Nanoscale Engineering	4
CHE 489	Biochemical Engineering	4
CHE 499	Chemical Process Safety	4

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**CORE GRADUATE PROGRAM REQUIREMENTS (16 units required)**

A list of all required graduate courses for the graduate program. None of these courses may be used toward satisfying undergraduate degree requirements.

*If special exceptions for any of these courses are made by the academic department, the course # is marked with an asterisk (\*) and the exception is explained in the "Department Notes" section at the end of this course plan template.*

Dept. Prefix - Course #	Course Title	Units
CHE 501	Modeling and Analysis of Chemical Engineering Systems	4
CHE 530	Thermodynamics for Chemical Engineers	4
CHE 538	Transport Processes I	4
CHE 542	Chemical Engineering Kinetics	4

**PRE-APPROVED ELECTIVE COURSEWORK**

Elective coursework is approved at the discretion of the academic department. Note the following details about the total number and units required of elective coursework.

12	<b>TOTAL ELECTIVE UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE</b>
8	<b>TOTAL ELECTIVE UNITS REQUIRED FOR THE PROGRESSIVE GRADUATE DEGREE</b>

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**TOTAL UNIT COUNTS AND REQUIRED GRADUATE UNITS**

28	<b>TOTAL UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE</b>
4	<b>TOTAL GRADUATE UNITS THAT MAY BE WAIVED (IF ANY)</b>
24	<b>MINIMUM NUMBER OF GRADUATE UNITS THAT MUST BE AT THE 500 LEVEL OR ABOVE</b>

**NOTES FROM THE DEPARTMENT**

This section highlights any unique considerations, exceptions, or requirements for the graduate program. If a program has specific restrictions (courses, majors, etc.), they are detailed below.

Students must take 16 units of core Graduate classes. Students can take a minimum of 8 elective units for the Progressive Degree. Please refer to elective list from the MFD Student Affairs Office.

Undergraduate courses used to reduce graduate units: Students can pick from UG course list but only 4 units can be applied to discount 28 -unit total towards the PDP Chemical Engineering degree.

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Kelly Goulis

**Authorizing Dean's Name**

October 24, 2022

**Date Approved**

Senior Associate Dean, Viterbi School of Engineering

**Authorizing Dean's Title**